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E. G. Wilbur



TWENTY-THIRD

ANNUAL REPORT

OF THE

BOARD OF DIRECTORS

OF THE

Lehigh Valley Railroad Co.

TO THE

STOCKHOLDERS.

January 15th, 1878.

PHILADELPHIA:

WILLIAM F. MURPHY'S SONS, PRINTERS.

1878.

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OFFICERS
OF THE
LEHIGH VALLEY RAILROAD Co.

January 15th, 1878.

PRESIDENT,
ASA PACKER,

VICE-PRESIDENT,
CHARLES HARTSHORNE.

TREASURER,
LLOYD CHAMBERLAIN.

SECRETARY,
JOHN R. FANSHAWE.

GENERAL SUPERINTENDENT AND CHIEF ENGINEER,
ROBERT H. SAYRE.

DIRECTORS.

CHARLES HARTSHORNE,
WILLIAM W. LONGSTRETH,
J. GILLINGHAM FELL,
WILLIAM H. GATZMER,
DAVID THOMAS,
ASHBEL WELCH,

WILLIAM L. CONYNGHAM,
ARIO PARDEE,
WILLIAM A. INGHAM,
JOSEPH WHARTON,
GEORGE B. MARKLE,
ROBERT H. SAYRE.



ANNUAL REPORT

OF THE

LEHIGH VALLEY RAILROAD CO.

January 15th, 1878.

Notwithstanding the interruptions to our trade in consequence of the general strike of railroad train hands, and of the suspension of work in the mines in the Wyoming Coal Field which lasted for ten weeks, the total coal tonnage of our road exceeds that of any previous year..

The following are the totals for each of the past five years, including both Anthracite and Bituminous Coal:—

1873.....	4,172,366 tons.
1874.....	4,177,282 “
1875	3,333,472 “
1876.....	3,987,018 “
1877.....	4,391,286 “

Showing an increase over 1876 of 404,268 tons, and an excess of 214,004 tons over the business of 1874, which has been our largest tonnage heretofore. The above figures do not include any coal carried over our Pennsylvania and New York Railroad, except such as has passed over a part of the Lehigh Valley Railroad. The accompanying Report of the former Company will show their tonnage, which has also largely increased over any previous year.

The continued low price of coal has made necessary a further reduction in the rates of transportation, and has correspondingly reduced our gross income, the average rate of tolls from Mauch Chunk to Perth Amboy having been for 1877, 98½ cents as compared with \$1.70₁⁵/₂ for the previous year.

Our income from all sources, including interest received from investments, &c., amounted to

	1877.	1876.
	\$7,100,218 94	\$8,037,247 20
Operating expenses of the road,	3,162,822 06	3,842,750 04
Net income,	\$3,937,396 88	\$4,194,497 16

Out of which there has been paid:—

Interest on Bonds, including premium on gold,	\$1,526,057 60
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Dividends:—

January, 2 ^{cts} et.	
April, 1½ "	
July, 1 "	
October, 1 "	1,502,356 50

General expenses, interest on floating debt, Penna. and New Jersey State taxes, loss on Morris Canal and on all coal operations,	847,693 18	3,876,107 28
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Leaving \$ 61,289 60 to be added to the credit of our Profit and Loss Account.

On November 30th, 1877, the close of the fiscal year, our capital account was as follows:—

Preferred and common stocks, including scrip not yet converted.....	\$27,228,855 00
Six per cent. Bonds, due in 1898 (Coupon and Registered)	5,000,000 00
Seven per cent. Registered Bonds, due in 1910,	6,000,000 00
Consolidated Mortgage Bonds—	
Sterling	\$4,682,000 00
Coupon.....	2,000,000 00
Registered	6,185,000 00
Annuity	434,000 00
	13,301,000 00
Floating debt less cash on hand.....	635,813 80
	\$52,165,668 80
Footings of Capital Account for 1876.....	51,875,128 14
Increase during the year.....	\$ 290,540 66

During the current year we increased our investments in Coal Lands by purchase of interests in properties on the line of our road, for which we paid \$292,500.00

As provided in the sinking fund for our sterling loan, 119 bonds were drawn, payable December 1st, 1877, leaving the amount outstanding and bearing interest from that date, \$4,563,000.

The business over the Easton and Amboy Railroad has largely increased, and equaled our most sanguine expectations,—1,405,508 tons of coal having been carried over that road last year, being a gain of 524,049 tons, or about 59½ per cent. over 1876.

The gross earnings of this portion of our line, which is worked as the New Jersey Division,

Amounted to..... \$1,070,752 18

Some of the expenses having been merged with those of the main line, we have made a pro rata estimate of the cost of operating, at the rate found as that of the whole line, or 48¾ per cent., which is quite as large as is fairly chargeable, and amounts to 521,991 68

Which leaves as direct net earnings, \$ 548,760 50
a sum equal to about 5½ per cent. of the cost of the whole work, in addition to which should be added the increase in business to our main line, arising from our ownership of this road.

At the request of this Board, a mortgage for the maximum sum of \$10,000,000 was made by the Easton & Amboy Railroad Company, covering all their property, and their bonds bearing six per cent. interest, have been delivered to the Lehigh Valley Railroad Company to the amount of \$5,000,000, in partial payment for the money expended by us in the construction of the road. We also hold \$5,000,000 of their stock, being all that has been issued. It is not proposed at present to dispose of any of these bonds, but, should we wish to do so in future, they will form a very desirable investment security, being a first mortgage on a double track railroad of sixty miles in length, with wharves of the fullest capacity, on tide water, having a business already established, and costing at the

close of the year, \$10,147,345.64; represented by the above named \$5,000,000 of stock, \$5,000,000 in bonds, and an indebtedness of \$147,345.64 to this Company.

The trade over our Northern connections has also increased largely, particularly the general freight business of the Pennsylvania and New York C. & R. R. Co., whose report is intended to be published herewith. We have received from them \$347,740 in cash, as a ten per cent. dividend for 1874 upon their preferred stock held by us in that year. Their accounts for the past year show that an equal amount has been earned for the preferred stock of 1875, which will form one of our receipts for the current year.

We refer to the report of the Superintendent and Engineer for further details of our business.

No change has taken place during the past year in the Board or general officers.

By order of the Board,

ASA PACKER,
President.

REPORT
OF THE
SUPERINTENDENT AND ENGINEER
OF THE
LEHIGH VALLEY RAILROAD COMPANY.

BETHLEHEM, PA., *November 30th, 1877.*

HON. ASA PACKER, *President.*

SIR:—The following report of the operations of the road for the fiscal year ending November 30th, 1877, is respectfully submitted.

The extremely low price at which coal has been sold during the year, has had the effect to increase consumption. This, notwithstanding the fact of a general and protracted strike in the Wyoming and Lackawanna Regions, has resulted in a larger tonnage for the year than in any preceding year since the opening of the road.

With the exception of a few days' interruption by a strike of our employees in the transportation department, by a short strike among the miners in the Lehigh Region and that above referred to in the Wyoming Region, our business has been conducted with great regularity. This with the several reductions made in the salaries and wages in every department of our business, necessitated by the low

rates of transportation, has enabled us to reduce the cost of transportation per ton per mile below that of any previous year of the past fifteen.

The rate of transportation per ton per mile received on coal this year was $\frac{3.5}{100}$ cents less than the previous year.

The total amount of anthracite coal transported over the main line and branches for the year, was 4,362,124.09 tons, an increase, compared with last year, of 410,610.10 tons, or 10.39 per cent., and an increase of 211,464.19 tons, or 5 per cent. over any previous year.

The coal was derived from the following sources:—

REGIONS	1876	1877	Increase	Decrease
Wyoming	1,072,687 19	1,031,777 13	.....	40,910 06
Hazleton	1,712,254 06	2,121,358 01	409,103 15	
Upper Lehigh.....	2,434 08	699 04	.....	1,735 04
Beaver Meadow	621,304 19	577,452 03	.....	43,852 16
Mahanoy	519,906 15	624,738 01	104,831 06	
Mauch Chunk.....	22,925 12	6,099 07	.....	16,826 05
Totals.....	3,951,513 19	4,362,124 09	410,610 10	

And was delivered as follows:—

Points of Delivery	1876	1877	Increase	Decrease
Mauch Chunk	3,200 19	2,806 14	.....	394 05
On line of road above				
Mauch Chunk	11,590 03	10,868 03	.....	722 00
On line of road above				
M. Ch'k for use of Co.	77,172 14	75,234 19	.....	1,937 15
To P. & N. Y. R. R....	467,728 12	581,291 10	113,562 18	
" Northern Cen. R.R.	23,845 19	25,869 08	2,023 09	
" D., H. & W. R. R....	40,990 03	46,399 13	5,409 10	
To L. & S. Div C. R. R.				
of N. J. at Packerton	6,617 12	9,882 10	3,264 18	
To L. & S. Div. C. R. R.				
of N. J. at P'n Haven				
for canal.....	85,953 17	1,508 00	.....	84,445 17
To L. & S. Div. C. R. R.				
of N. J. at P'n Haven				
for rail	718 05	341 02	.....	377 03
To Lehigh Canal Mauch				
Chunk.....	82,849 08	141,211 08	58,362 00	
To Catawissa R. R.	162 19	.....	.....	162 19
" L. & B. R. R.	20,787 16	13,152 19	.....	7,634 17
Local east of M. Chunk	49,593 18	41,122 01	.....	8,471 17
East of Mauch Chunk				
for use of Co.	83,227 11	82,166 10	.....	1,061 01
To Furnaces & Mg. Co's	402,080 10	463,613 04	61,532 14	
" Berks & Lehigh R. R.	347 17	50 17	.....	297 00
" Cata. & Fog. R.R....	6,500 07	4,436 15	.....	2,063 12
" Ironton R. R.	7,103 18	7,293 18	190 00	
" East Penn. R. R....	1,609 01	355 17	.....	1,253 04
" Perkiomen Br'ch P.				
& R. R.	24,883 07	47,403 11	22,520 04	
To North Penn. R. R....	197,661 16	210,849 10	13,187 14	
" Pt. Delaware, (Mor-				
ris Canal).....	212,776 07	261,345 09	48,569 02	
To Morris & Essex R. R.	259,518 00	96,355 01	.....	163,162 19
" Bel. Div. Pa. R. R....	962,630 10	791,262 14	.....	171,367 16
" C. R. R. of N. J....	40,503 10	41,755 03	1,251 15	
" N. J. Div. L. V. R. R.	881,459 00	1,405,547 11	524,088 11	
Totals	3,951,513 19	4,362,124 09	410,610 10	

The increase of tonnage cast of Mauch Chunk, is 323,662.11 tons, or 10.34 per cent.

The amount of coal delivered to furnaces, rolling mills and other manufacturing establishments upon our line, shows an increase of 61,532.14 tons, or 15.30 per cent., and aggregates 463,613.04 tons.

Coal delivered on the line below Mauch Chunk, including New Jersey Division and its connections, for local consumption, amounts to 191,196 tons, being an increase of 31,089 tons, or 19.42 per cent.

261,345 tons of coal passed into the Morris Canal at Port Delaware, and 1,405,548 tons, being an increase of 524,089 tons over last year, passed on to our New Jersey Division. 1,255,475 tons of this was shipped over Perth Amboy Wharves.

TONS OF ANTHRACITE CARRIED ONE MILE.

REGION	1876	1877	Increase or Decrease
Wyoming	34,136,517.05	27,749,760.01	<i>Dec. 6, 386,757.04</i>
Hazleton	39,955,716.17	50,201,281.18	10,245,565.01
Beaver Meadow	13,547,469.18	12,707,611.18	<i>Dec. 839,858.00</i>
Mahanoy	19,231,308.07	23,813,736.15	4,582,428.08
Total above M. Chunk..	106,871,012.07	114,472,390.12	7,601,378 05
Total below "	185,473,825.16	231,476,728.14	46,002,902.18
Grand Total.....	292,344,838.03	345,949,119.06	53,604,281.03

The number of tons of anthracite coal carried one mile was 18.34 per cent. greater, and the rate per ton per mile received 20.35 per cent. less, than in 1876.

Miscellaneous freight has continued to increase in volume, and reached a total of 88,142,185 $\frac{51}{100}$ tons carried one mile, an excess over last year of 18,239,467 $\frac{72}{100}$ tons, or 26 $\frac{9}{100}$ per cent.

The increased earnings however were only 9.44 per cent., as the receipts per ton per mile decreased .22 of a cent. The rates are now lower than in any previous year in the history of our road, and show a steady decline from the year 1867 amounting to 1.51 cents per ton per mile,—in other words the rate per ton per mile obtained in that year applied to the tonnage of this year would have yielded more than double this year's revenue from this source.

The large falling off in receipts from passenger travel as compared with the Centennial year was to be expected. Pleasure travel seems to have expended itself last year.

In addition to this, several of our trains were suspended with a view of reducing expenses.

The mileage of passenger trains for the year just closed, was 655,771 miles; for the year 1876, 995,236 miles, and for the year 1875, 736,723 miles.

The receipts per train mile were 69.13 cents, in 1877; 83.18 cents, in 1876, and 70.60, in 1875.

The total road receipts and expenses for the year are shown below:—

From transportation of	Gross Receipts	Expenses	Net Receipts
Coal	\$4,721,725 75	\$2,165,760 73	\$2,564,965 02
Freight.....	1,303,970 69	710,178 97	593,791 72
Passengers, Express & Mail..	453,340 18	286,882 36	166,457 82
Total.....	\$6,488,036 62	\$3,162,822 06	\$3,325,214 56
1876	7,049,646 56	3,842,750 04	3,206,896 52
Increase or <i>Decrease</i>	\$561,609 94	\$679,927 98	\$118,318 04
Increase or <i>decrease</i> per ct.	7.96	17.69	3 69

Cost of operating the road 48.75 per cent. of receipts.

There are now in use on all divisions of the track:—

136.07 miles of single track,
 155.19 miles of double track, in addition to which there are
 13.76 miles of second track laid, but used as sidings, and
 174.57 miles of sidings,

Total, 634.78 miles, a decrease during the year of 2.86 miles, caused by taking up track at top of Penn Haven Planes and Branch to Eckley, No. 2, on Hazleton Division, and Jackson's Branch on Mahanoy Division.

There are also on the main line and branches, 7.55 miles of grading complete and ready for the track, as follows:—

On Lehigh Division.....0.63 miles.
 On Wyoming Division..... 2.88 “
 On Hazleton Division.....3 84 “
 On Beaver Meadow Division.....0.20 “

Total.....7.55 miles.

The following materials were used for repairs and construction:—

DIVISION	Steel Rails	Iron Rails	Switch Frames	Frogs	Cross-Ties	Splices	Kegs of Spikes
New Jersey.....	103	412	7	5	3,444	407	27
Lehigh.....	9,647	220	67	76	33,307	9,695	227
Wyoming	430	.....	34	56	26,519	200	129
Hazleton	1,393	.....	24	54	23,113	893	54
Beaver Meadow...	1,697	779	6	37	25,330	1,829	116
Mahanoy	1,600	399	11	27	33,281	1,408	119
Total	14,870	1,810	149	255	144,994	14,432	672
P. & N. Y. R. R. Wilkesbarre to L. & B. Junction	38	220	25	15	8,157	200	12

RAILS.

We have relaid track with steel rails, and have now in use as follows:—

MILES OF STEEL TRACK	On last report	Laid and relaid this year.	Total now in use
On New Jersey Division.....	64.57	0.78	65.35
On Lehigh Division.....	69.13	24.57	93.70
On Wyoming Division	50.52	0.83	51.35
On Hazleton Division.....	14.69	3.40	18.09
On Beaver Meadow Division.	23.92	4.74	28.66
On Mahanoy Division.....	9.31	4.53	13.84
Total.....	232.14	33.85	270 99
P. & N. Y. R. R., Wilkes-Barre to L. & B. Junction.	9.60		9.60

BRIDGES.

At Rockdale an arched culvert of twelve feet span, sixty-five feet in length, for four tracks, has been built, to replace the old wooden truss bridge for two tracks, and the remainder of the opening has been filled by an embankment.

At Bridgeport a double track iron truss bridge of five spans, total length 578 feet, has been built, to replace the old wooden truss bridge crossing the Lehigh at that place.

This leaves but one wooden structure of importance on our main line, from Perth Amboy to Wilkes-Barre, viz.; the bridge crossing the Lehigh at Penn Haven Junction.

EQUIPMENT.

Our locomotive equipment has been increased during the year, by two engines, built at our own shops.

We have increased our stock of cars as follows:—

BUILT AT OUR OWN SHOPS.

Wreck and tool cars.....	2
Four-wheeled cabooses.....	2
Eight-wheeled cabooses.....	2
“ “ platform cars.....	14
“ “ gondola cars.....	20
“ “ house cars.....	144
Four-wheeled coal cars.....	618

Three of our passenger cars have been worn out and put out of service during the year.

Our equipment is now as follows:—

	On last Report	Increase	Decrease	November 30, 1877
Engines of all classes.....	232	2	.....	234
Passenger Cars.....	75	.....	3	72
Pay Car.....	1	.....	.....	1
Baggage and Express Cars.....	36	.....	.....	36
Gravel Cars.....	166	.....	.....	166
Eight-wheeled House Cars.....	756	144	.....	900
Stock Cars.....	12	.....	.....	12
Wreck and Tool Cars.....	24	2	.....	26
Four-wheeled Platform Cars..	9	.....	.....	9
Six-wheeled Platform Cars.....	100	.....	.....	100
Eight-wheeled Platform Cars ..	411	14	.....	425
Four-wheeled Caboose Cars..	22	2	.....	24
Six-wheeled Caboose Cars	1	.....	.....	1
Eight-wheeled Caboose Cars	37	2	.....	39
Lime Cars	44	.....	.....	44
Gondola Cars	289	20	.....	309
Tunnel Coal Cars	100	.....	.....	100
Coal Cars, rated as four-wheeled	23,777	618	.....	24,395

TRACK.

The relaying of heavy track between Mauch Chunk and Easton with 66lb steel rail, has been completed, and the lighter steel rail moved to the up track, replacing iron. All betterments of track have, as usual, been charged to maintenance of way.

No serious interruption to business, from defective track or roadway, has occurred during the year. A part of one day's detention occurred on New Jersey Division owing to the washing out of an

8 ft. stone arch, under a 30 ft. embankment. Several serious slides have occurred at Springtown and Musconetcong embankments—both of which are considerably over 100 ft. in height, but no detention of traffic ensued.

The low price at which steel rails can now be purchased, will, I trust, induce the Board to replace every iron rail in our tracks with steel. The difference in cost is now but \$5 per ton.

The steel rails laid at Packerton Scales referred to in former reports, have now passed a gross tonnage of 35,264,464 tons, and are probably good for 10,000,000 tons additional. At the same point two sets of iron rails were worn out in the passage of 3,788,545 tons.

DOCKS AND WHARVES.

All are in good condition and ample for our present business, though I would recommend that an additional dock be built during the next year. This will facilitate the handling of iron, iron ore, slate, etc., and can, by the erection of trestles thereon, and the necessary approach thereto, be used for transfer of coal if needed.

The extension of Lost Creek branch to Girardville, a distance of $2\frac{3}{10}$ miles, was begun the latter part of the summer and is nearly completed. This was necessary to reach all the collieries of the Philada. Coal Co., and it is proposed to continue this branch to Ashland, a further distance of $2\frac{7}{10}$ miles, with a view of obtaining the tonnage of the Locust Mountain Coal Co.

In view of the coming necessity of double tracking our road northward from Penn Haven, I would recommend the commencement of the short tunnel at Rockport, spoken of in my report of November 30th, 1874.

Our engine houses and shops for sheltering and repairing our locomotives are entirely inadequate on the Lehigh Division, and I would earnestly recommend that the necessary facilities be provided at South Easton, where ground has been purchased for the purpose.

Very respectfully,

ROBERT H. SAYRE,

Sup't. and Engineer.



REPORT

OF THE

Pennsylvania and New York Canal

AND

RAILROAD COMPANY.

OFFICERS AND DIRECTORS

OF THE

Pennsylvania & New York Canal and R. R. Co.

PRESIDENT,

ROBERT H. SAYRE.

TREASURER,

CHARLES HARTSHORNE.

GENERAL SUPERINTENDENT,

ROBERT A. PACKER.

AUDITOR,

JOHN B. GARRETT.

DIRECTORS.

ASA PACKER,

WILLIAM W. LONGSTRETH,

CHARLES HARTSHORNE,

ROBERT A. PACKER,

VICTOR E. PIOLLET,

GARRETT B. LINDERMAN,

J. HENRY SWOYER,

JOHN J. TAYLOR,

ROBERT LOCKHART,

JOHN W. HOLLENBACK,

WILLIAM H. SAYRE,

ELISHA P. WILBUR.

REPORT.

Bethlehem, Pa., November 30th, 1877.

TO THE STOCKHOLDERS OF THE PENNSYLVANIA AND NEW YORK
CANAL AND RAILROAD COMPANY.

The Managers submit the following report:—

The earnings and expenses for the fiscal year, ending November 30th, 1877, were as follows:—

From	Gross Receipts	Expenses	Net Receipts
Transportation of Coal.....	\$935,959 85	\$509,317 83	\$426,642 02
Transportation of Freight....	422,044 58	269,936 19	152,108 39
Transportation of Passen- } gers, Express and Mail, }	158,118 59	118,267 66	39,850 93
Canal.....	378 65	1,848 32	Loss, 1,469 67
Miscellaneous	45,883 60		45,883 60
Total	\$1,562,385 27	\$899,370 00	\$663,015 27
1876	1,678,338 74	1,070,229 66	608,109 08
Increase or <i>Decrease</i>	<i>\$115,953 47</i>	<i>\$170,859 66</i>	<i>\$54,906 19</i>
Percentage of Increase or <i>De-</i> <i>crease</i>	6 91	15.96	9.03

Operating expenses 57.56 per cent.

There has been paid during the year \$210,000 for interest on bonds, leaving \$453,015.27, applicable to taxes, dividends, interest, &c. The result will enable us to declare a dividend of \$350,000, being 10 per cent. on the preferred stock outstanding in 1875.

The protracted strike of the miners in Wyoming Region, from which our tonnage is derived principally, involved irregularity in our business, and prevented so great a reduction in the operating expenses as would otherwise have resulted. The lower rates obtained for transportation of coal, and the great falling off in travel, reduced the income from both those sources, in the aggregate \$173,996.92.

The receipts from miscellaneous freight traffic show an increase of \$34,714.80.

About $8\frac{1}{2}$ miles of new track has been added during the year, and preparations are being made to lay additional sidings on line of double track during the ensuing year. The heavy coal traffic of the last two months of the season, made apparent the necessity for this.

The present low price of materials would seem to justify the renewal of the remaining wooden bridges upon the road by iron structures.

The tonnage of the Buffalo Creek Railroad has been larger than that of any previous year, and its receipts have, for the first time in its history, been sufficient to meet the operating expenses, taxes, and interest on the floating debt, yielding no return, however, as yet, upon the original investment. The tonnage over it during the past year was coal 242,983 tons, miscellaneous 130,530 tons, resulting in a gross revenue of \$41,249.99.

For details of the business of the road and matters of interest relating thereto, see report of the Superintendent accompanying this.

The building of shops at Sayre for repairs of our locomotives and cars has become a necessity, and it is proposed to commence their erection in the ensuing spring. Plans are being prepared for buildings of sufficient capacity for all our future wants, but only such portions will now be built as our present necessities demand.

By order of the Board,

ROBT. H. SAYRE,
President.

REPORT OF THE SUPERINTENDENT

OF THE

Penna. & New York Canal & R. R. Co.

Office of the General Superintendent.

SAYRE, PA., November 30th, 1877.

ROBERT H. SAYRE, Esq., President.

SIR:—The following report of the operation of this road, for the fiscal year ending November 30th, 1877, is respectfully submitted.

COAL TONNAGE.

The total amount of coal transported upon the road, during the year just closed, was 1,252,255 $\frac{1}{2}$ $\frac{4}{10}$ tons, an increase of 86,303 $\frac{2}{10}$ tons, or 7 $\frac{4}{10}$ per cent. over business of the preceding year.

The general strike of employés on the principal roads of the country, which occurred in July last, though not participated in by our employés, prostrated and deranged our business in common with others, and extending in the latter part of July to Wyoming Coal Region, caused an almost total cessation of coal shipments for the months of August, September and part of October. After the resumption of work at the mines, the volume of shipments for the remainder of the season was larger than ever previously known on our road; over one-fourth of the entire year's tonnage having been carried during the last eight weeks. Under these adverse circumstances, it is gratifying to find our tonnage considerably in excess of any previous year.

The following details of production and distribution will be found of interest. This report embraces the first full year's business since the completion of the 3rd rail on Erie Railway, and the effect of this improvement upon the distribution of anthracite coal will be easily seen.

Total anthracite and bituminous coal tonnage for 1877, compared with tonnage for previous year.

	1876		1877		Increase		Decrease	
	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
Anthracite.....	804,344.15		911,754.12		107,409.17			
Bituminous.....	361,607.17		340,501.02		.....		21,106.15	
Total.....	1,165,952.12		1,252,255.14		86,303.02			

The anthracite tonnage was derived from the following sources :

REGIONS	1876		1877		Increase		Decrease	
	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
Wyoming	760,926.06		878,782.08		117,856.02			
Hazleton	6,897.07		8,359.05		1,461.18			
Beaver Meadow.....	1,948.00		4,410.17		2,462.17			
Mahanoy	26.16		700.00		673.04			
Sullivan	34,546.06		19,502.02		.....		15,044.04	
Total.....	804,344.15		911,754.12		107,409.17			

And was distributed as shown by statement below :

	1876		1877		Increase		Decrease	
	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
On Line Road.	22,130.01		24,245.05		2,115.04			
Montrose Railway	3,801.01		3,350.01		.....		451.00	
S. Central R. R.	201,471.14		195,095.06		.....		6,376.08	
G., I. & S. R. R.	271,258.16		272,343.06		1,084.10			
Lehigh Valley R. R....	10,831.10		10.10		.....		10,821.00	
Erie Railway Junct. ...	71,061.14		66,181.16		.....		4,879.18	
Erie Railway, 3d rail..	114,670.19		270,089.06		155,418.07			
Watkins "direct."	70,062.07		37,077.18		.....		32,984.09	
For use of Company...	39,056.13		43,361.04		4,304.11			
Total.....	804,344.15		911,754.12		107,409.17			

The sources of supply and distribution of the bituminous coal tonnage were as follows:

RECEIVED FROM	1876		1877		Increase	Decrease
	Tons	Cwt.	Tons	Cwt.	Tons Cwt.	Tons Cwt.
BARCLAY REGION.						
Towanda Coal Co.....	160,343.07		164,344.01		4,000.14	
Schraeder " "	200,795.12		175,755.07		.....	25,040.05
North'n Cen.R. W. (Gas Coal)	468.18		401.14		.....	67.04
Total	361,607.17		340,501.02			21,106.15

DISTRIBUTION.

	1876		1877		Increase		Decrease	
	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
On Line of Road.....	1,765.04		1,165.16				599.08	
To S. C. R. R.	160,631.06		131,614.07				29,016.19	
To G., I. & S. R. R.	22,835.10		23,571.16		736.06			
To L. V. R. R.	15,126.17		19,070.09		3,943.12			
To Erie Railway	160,343.07		164,344.01		4,000.14			
Used by Company.....	905.13		734.13				171.00	
Total.....	361,607.17		340,501.02				21,106.15	

TONS CARRIED ONE MILE.

	1876	1877	Increase	Decrease
Anthracite, in tons....	69,283,037 ^{$\frac{4.5}{100}$}	81,685,079 ^{$\frac{6.0}{100}$}	12,402,042 ^{$\frac{1.5}{100}$}	
Bituminous, in tons ...	7,945,194 ^{$\frac{1.3}{100}$}	7,890,447 ^{$\frac{5.2}{100}$}	.....	54,746 ^{$\frac{6.1}{100}$}
Total	77,228,231 ^{$\frac{5.8}{100}$}	89,575,527 ^{$\frac{1.2}{100}$}	12,347,295 ^{$\frac{5.4}{100}$}	

The percentage of increase in tons carried one mile was $15\frac{9.9}{100}$. The average rate per ton per mile received for transportation, was $\frac{8.3}{100}$ of a cent, a decrease from last year of $\frac{3}{100}$ of a cent per ton per mile. The gross receipts from this source have decreased $1\frac{4.3}{100}$ per cent.

The total amount of coal delivered to Erie Railway, in narrow gauge cars, for transportation via third rail to points west of Elmira, during the year, was $234,796\frac{5}{10}$ tons. Of this amount, we have hauled with our own trains, between Waverly and Buffalo, $186,345\frac{6}{10}$ tons in regular coal cars, mostly for reshipment by lake from Buffalo. The remaining $48,450\frac{9}{10}$ tons loaded in return box cars, and chiefly consigned by all rail routes to points west of Buffalo, was hauled in Erie Railway trains from Waverly.

The western freight and line cars received by us with grain and other freight, have been loaded back with coal. The amount loaded in cars returnable via Erie Railway, as stated above, was $48,450\frac{9}{10}$ tons; in cars returnable via Geneva, Ithaca & Sayre R. R., $4,751\frac{1}{10}$ tons; and via Southern Central R. R., $3,782\frac{3}{10}$ tons. Making a total of $56,984\frac{3}{10}$ tons in line cars.

FREIGHT.

The amount of freight, exclusive of coal, transported on our road during the year, was $451,729\frac{3}{10}$ tons, an increase from last year of $93,097\frac{1}{10}$ tons, or $25\frac{9}{10}$ per cent. The transportation service on this freight was equal to $38,710,072\frac{4}{10}$ tons carried one mile, an increase of $9,291,028\frac{4}{10}$ tons one mile, or $31\frac{5}{10}$ per cent.

Although the tonnage is very largely in excess of any previous year, the gross earnings from this source show an increase of but $8\frac{9}{10}$ per cent. over last year. The comparatively small increase in receipts is owing to the extremely low rates which have prevailed on through freights. The average rate per ton per mile on all freight for the year just closed, was $1\frac{9}{10}$ cents, against $1\frac{3}{10}$ cents for previous year, a reduction of $\frac{2}{10}$ of a cent. There has been a steady reduction in the rates obtained for transportation of freight since 1873, when the average rate was $2\frac{4}{10}$ cents per ton per mile. In consequence of this reduction of rates, it is found that while the number of tons moved one mile, in 1877, is $128\frac{2}{10}$ per cent. greater than in 1873, the increase of gross receipts from this source, during the same period has been but $2\frac{4}{10}$ per cent.

The change in the situation during the past four years amounts practically to this,—that the service necessary to earn a given sum

has been more than doubled. These circumstances are not peculiar to our own road and business, but apply with varying proportions to the whole railway system. The problem presented to us, in common with others, has been to perform this additional service without such increase of cost, as would wipe out all profit to the owners. This is a problem which cannot be successfully solved without the co-operation of all parties in interest—capital, as well as labor, must bear its share of the burden, and the sacrifices of each must be supplemented by faithful management and rigid economy of expenditures. The measure of success attending its solution, is a better index to the value of railway property, than can ever be obtained in times of general prosperity and high rates.

PASSENGER BUSINESS.

The number of passengers carried during the year was 170,853, equal to 7,581,092 carried one mile. Compared with the business of 1876, when the earnings from this source were doubled by the great tide of "centennial travel," this shows a decrease of $48\frac{82}{100}$ per cent. in total number of passengers, and of $60\frac{70}{100}$ per cent. in passengers carried one mile, and of $51\frac{70}{100}$ per cent. in gross receipts. The business of that year however was so exceptional in character and volume, that comparisons drawn from it are of no practical value for our present purpose. Comparing the business of this department for the year just closed with that of 1875, we note that while the total number of passengers carried has decreased 31,054, or $15\frac{38}{100}$ per cent.; the passenger mileage or number carried one mile, has increased 1,742,393 miles, or $29\frac{84}{100}$ per cent., and the gross receipts have decreased $4\frac{36}{100}$ per cent. These figures show that through travel over our road has been quite largely increased, while the local travel has fallen off,—the former owing to improved connections and arrangements for western travel; the latter in part to the general stagnation of business, and in part to the decrease in the number of local trains.

The average amount received for transportation of each passenger was $92\frac{27}{100}$ cents. The average distance traveled by each was $44\frac{37}{100}$ miles, and the average rate per passenger, per mile, was $2\frac{8}{100}$ cents.

CANAL.

The amount of canal tolls collected at Wilkes-Barre during the year, was \$378 $\frac{6.5}{100}$, a decrease of \$253 $\frac{9.0}{100}$ from previous year. The amount of coal on which tolls were collected, was 4,107 tons, and of other freights, 3,656 tons.

EQUIPMENT.

We have purchased, during the year, one new four-wheel connected engine for freight or heavy passenger service, to replace engine 201 which was worn out and condemned as unfit for further service. This leaves the number of locomotives now owned the same as on last report. We have expended during the year for labor and materials used in locomotive repairs \$64,120 $\frac{7.5}{100}$. Of this amount only \$14,290 $\frac{6.4}{100}$ was expended in our own shop; the balance having been paid to L. V. R. R. Co. and others, for work which we could not do for lack of shop room and tools. All of this work, together with the repairs for G. I. & S. R. R., could be done with equal economy, and far greater convenience, in shops of our own located at Sayre. A very moderate outlay for buildings, and the addition of a few tools, would suffice for present purposes, and is urgently recommended.

We have increased our stock of cars, by purchase, during the year, of 98 eight-wheeled coal cars, and 14 box cars.

We now have the following:

Locomotives.....	50
Wrecking and derrick cars.....	3
Gravel cars.....	31
Four-wheeled caboose cars	28
Eight-wheeled caboose cars	4
Eight-wheeled platform cars.....	57
Eight-wheeled gondola cars.....	200
Eight-wheeled stock cars	95
Eight-wheeled box or house cars.....	245
Four-wheeled coal cars.....	800
Eight-wheeled coal cars.....	100

and the usual supply of hand cars and trucks.

TRACKS.

The total length of track now laid and in use, is $210\frac{6.5}{100}$ miles, an increase of $8\frac{4.2}{100}$ miles from last year.

The track mileage is classified and described as follows :

	Miles.
Main Line, Wilkes-Barre to State Line	104.30
Second track in use as such	33 96
Sidings, and second track used for sidings.....	46.36
Waverly & State Line R. R., and sidings.....	3.71
Branch connecting with G., I. & S. R. R.....	2.94
Branch connecting with S. C. R. R.....	4.08
Sidings at Waverly.....	.39
Sidings at Elmira.....	.58
Branch connecting with Barelay R. R.....	2.71
Pleasant Valley Branch.....	5.82
Sidings at West Pittston.....	1.23
Plainsville Branch .....	.90
Mill Creek Branch.....	2.61
Mineral Spring Branch	1.06
Total	<u>210.65</u>

At the date of our last annual report, the work of grading for second track was in progress at several points between Vosburg and Falls Station, and between Coxton and L. & B. Junction. This work was continued until stopped by the approach of cold weather—when about 2 miles had been graded—and has not since been resumed, except on a limited scale within the past 30 days, at points where additional siding room was required for passing trains.

In Coxton yard, 3000 feet of new sidings have been laid. Grading has been prepared for some additional sidings, and a new water tank erected.

The siding at LeGrange has been lengthened one mile, on line of second track where grading had previously been prepared.

At Tunkhannock, about 2 miles have been added to sidings, available for second track.

The siding at Carmodys has been lengthened one mile on location of second track.

At Wyalusing, a new switch 3,559 feet long, has been graded and laid on berme side of canal, to be used for passing trains, and not available for second track. Grading is now in progress on line of second track for one mile south from Frenchtown, and for one and a half miles north from Standing Stone, to furnish additional siding room for passing trains.

The sidings at Towanda have been lengthened 2,400 feet, and at Sayre and in Waverly yard, about three miles of new side track have been laid.

The following materials have been used during the year, in construction and repairs of track:—For construction, 218 steel rails, 1,987 iron rails, 12,963 lineal feet of switch ties, 13,512 sills, 214 kegs of spikes, 1,034 splice plates, 36 frogs, &c. For repairs, 7,327 steel rails, 1,808 iron rails, 10,682 lineal feet of switch ties, 77,815 sills, 295 kegs of spikes, 791 pairs of splice plates, 50 frogs, &c.

BRIDGES.

The following iron bridges have been erected during the year, to replace wooden bridges heretofore in use, at the points named, viz:—

A double track bridge of 2 spans, each 119 feet in length, over Lackawanna River, near Pittston.

A double track bridge of 2 spans, each 165 feet in length, over Tunkhannock Creek.

A double track girder, 19 feet 9 inches in length, over creek at Black Walnut.

Single track girders, as follows:—

One span, 28 feet long, at Teague's Eddy.

Two spans, each 26 feet long, over small creeks between Meshoppen and Black Walnut.

One span, 24 feet long, 3 miles below Wyalusing.

One span, 39 feet long and one of 26 feet, over creeks a short distance above Laceyville.

The track crossing canal near Lackawanna Junction, is supported on trestles. As the elevation is only 12 feet, and the canal at that point not used for navigation, these trestles can be maintained, and the single track wooden bridge of one span 110 feet in length can be dispensed with.

A contract has been made for the erection of a new double track iron bridge at Wyalusing.

The frame engine house at Tunkhannock has been moved to a more convenient location, and enlarged so as to shelter 2 engines. A frame engine house of sufficient size to accommodate four engines has been erected at Buffalo, for our engines running over third rail on Erie Railway; and a similar house is required at Hornellsville.

The office building which was in course of erection at Sayre, at the beginning of this year, was completed and occupied in June, 1877. This is a substantial brick structure, 28 x 44 feet in size, having three stories and a basement, and is conveniently arranged for the offices of our road, besides furnishing the G., I. & S. R. R., with office room required at this point.

Our relations with connecting roads have been harmonious, and the interchange of business has been carried on in a satisfactory manner.

My thanks are due to the Assistant Superintendent, and other officers and employes, for the manner in which they have seconded my efforts, for the prompt transaction of business during the past year.

Yours, respectfully,

R. A. PACKER,

General Superintendent.

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